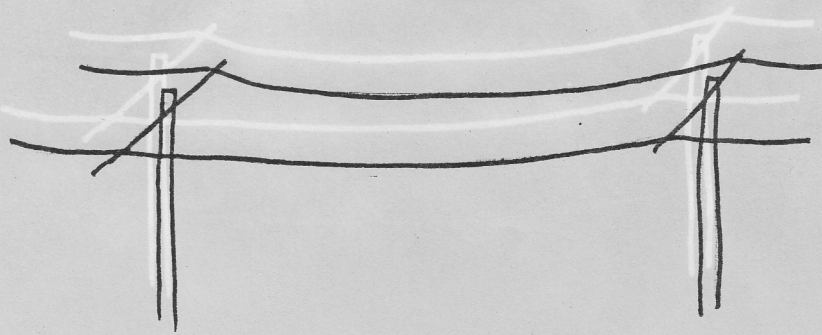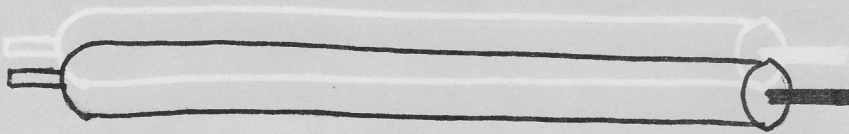# Radio Telecommunications and the IBM Personal Computer

- What it is
- An Amateur Radio implementation
  - Generalized system
  - Specialized system

TELEPHONE LINES

COAX OR TWINAX CABLE
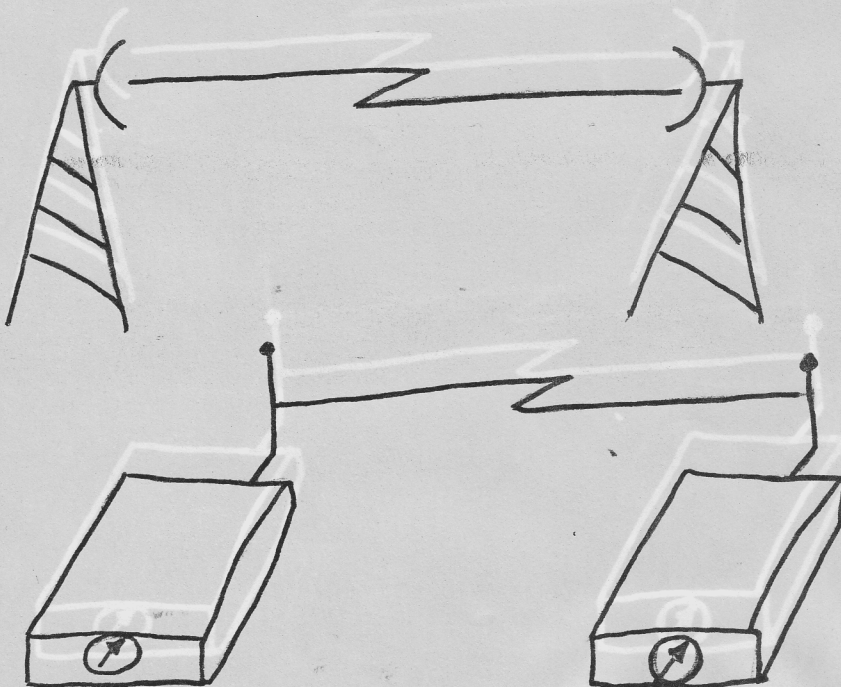
FIBER OPTIC CABLE

MICROWAVE & SATELLITE LINKS

RADIO

TRANSMISSION MEDIA
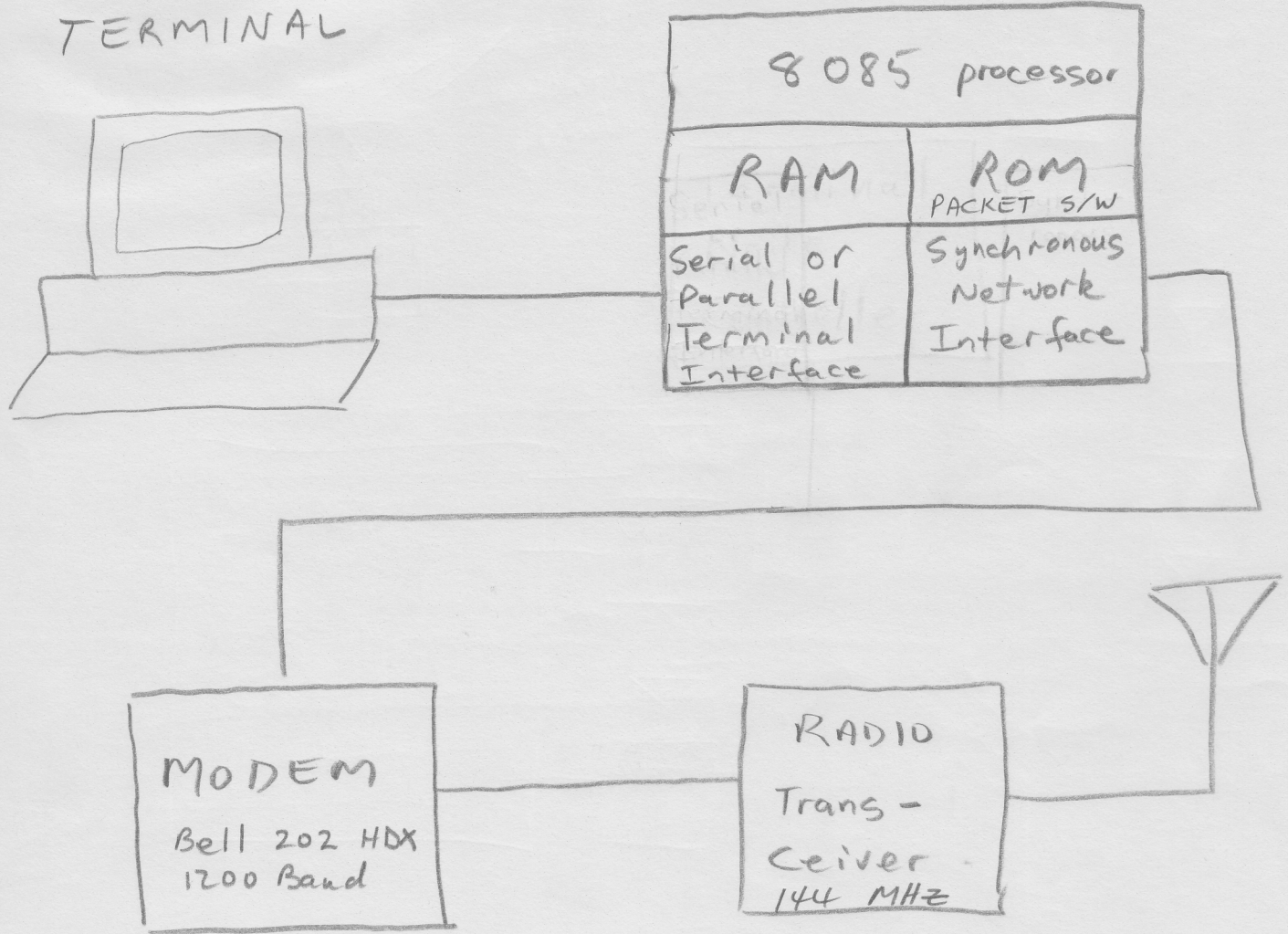
APPLICATIONS

- Typed conversations

- Data file transfer

- Remote bulletin board system (RBBS)

  - Messages
  - Information
  - Programs

Other Station
Nodes

Channel
3

Repeater
and/or
Station Node
controller

Channel
1

Channel
2

Station
1

Station
2
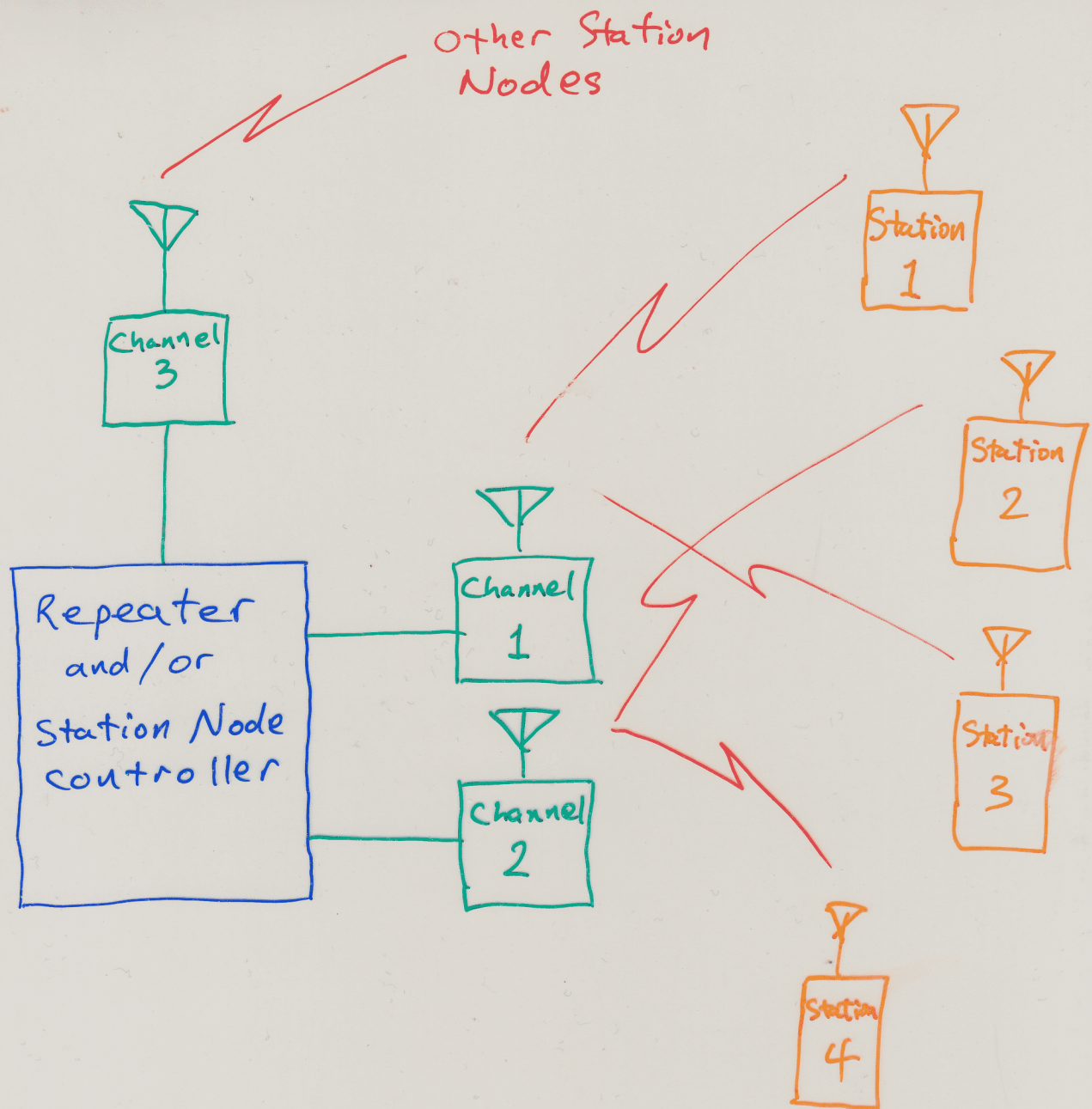
Station
3

Station
4

Packet Radio Network

TERMINAL

Terminal Node Controller

8085 processor	
RAM	ROM PACKET S/W
Serial or Parallel Terminal Interface	Synchronous Network Interface

MODEM
Bell 202 HDX
1200 Band

RADIO
Trans-
Ceiver
144 MHZ

Traditional Packet Radio Station

PROTOTYPE
BOARD

PC

8273
SDLC
Processor

IBM-PC
Bus
INTERFACE

RS-232
Synchronous
Port

PACKET
S/W

MODEM
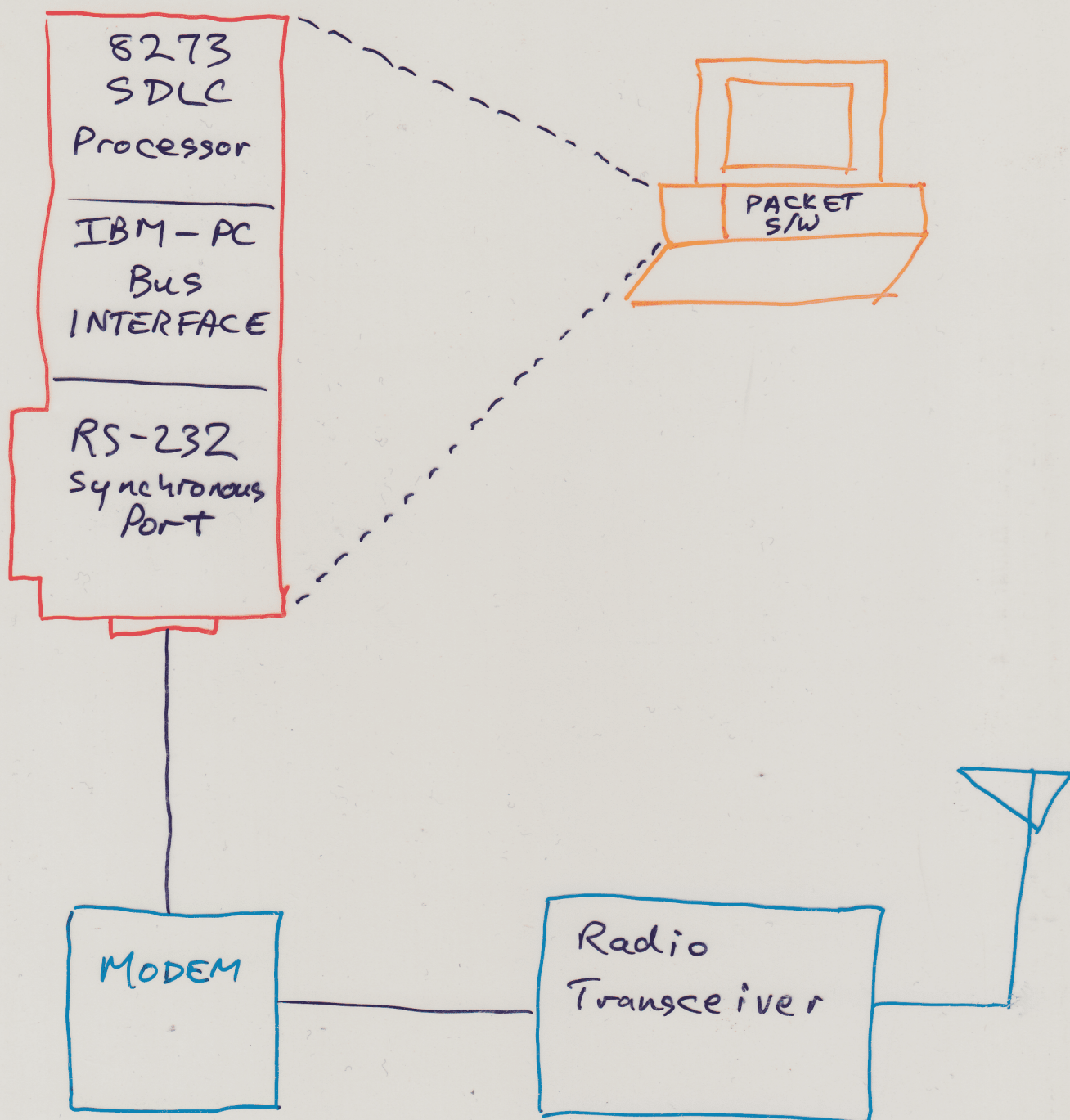
Radio
Transceiver

All Terminal Node Controller Functions
moved into the PC.

MODEM
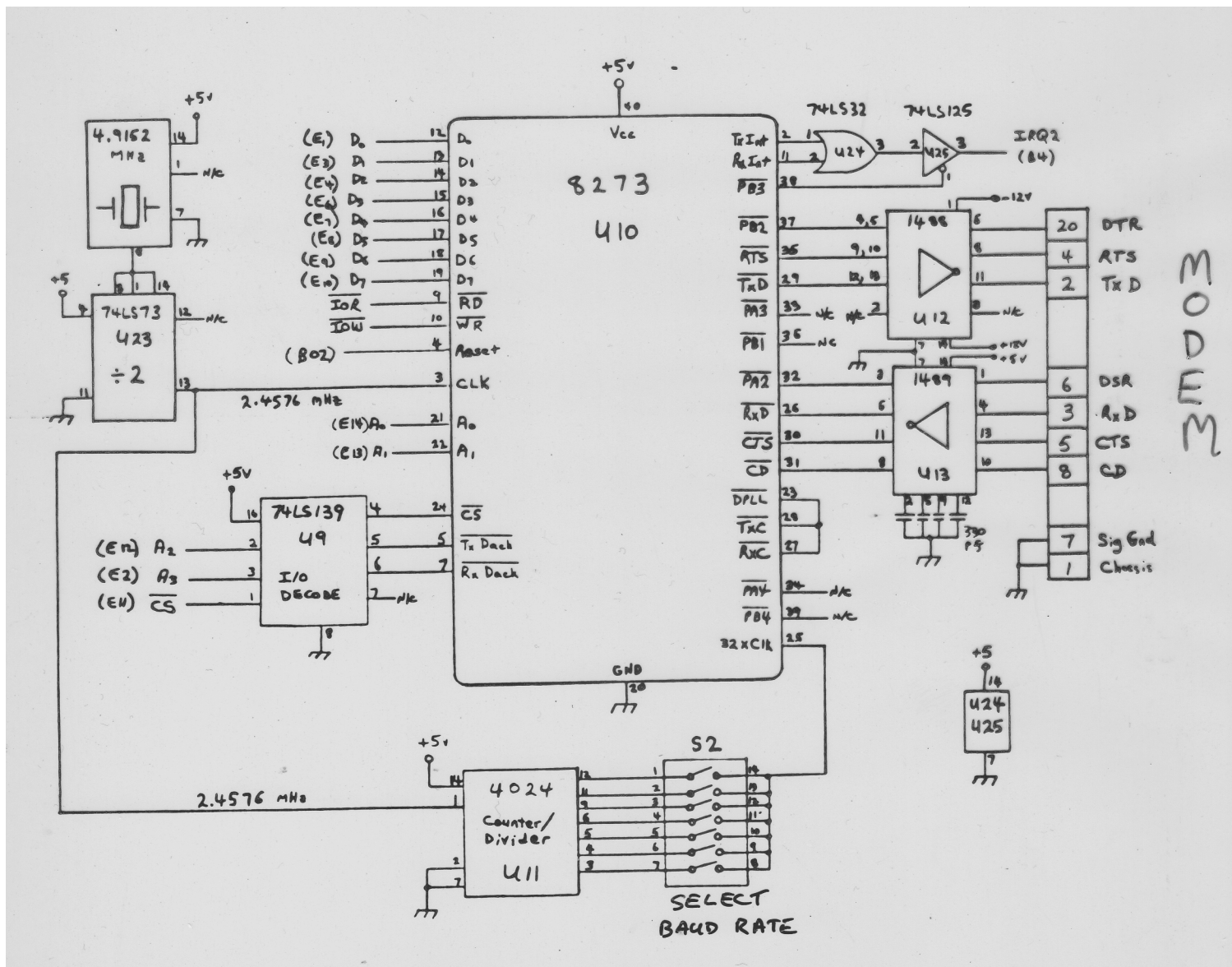
Status of Amateur Packet Radio

- Layers 1 and 2 (Physical and Link layers) implemented

- Layers 3, 4, and 5 (Network, Control, and Transport end-to-end) under development

- 1200 Baud links currently in use, higher speeds (4800, 9600 Baud) planned

- Future plans include world-wide networking, using amateur satellite links.